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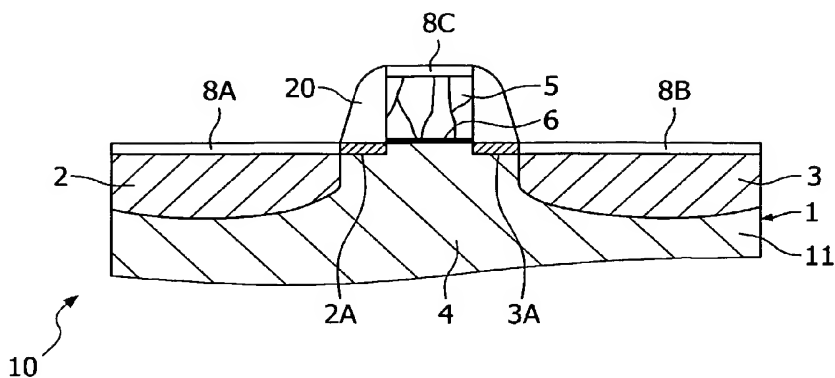
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[Continued on next page]

(54) Title: METHOD OF MANUFACTURING A SEMICONDUCTOR DEVICE AND SEMICONDUCTOR DEVICE OBTAINED WITH SUCH A METHOD



(57) Abstract: The invention relates to a method of manufacturing a semiconductor device (10) in which a semiconductor body (1) of silicon is provided, at a surface thereof, with a semiconductor region (4) of a first conductivity type, in which region a second semiconductor region (2A, 3A) of a second conductivity type, opposite to the first conductivity type, is formed forming a pn-junction with the first semiconductor region (4) by the introduction of dopant atoms of the second conductivity type into the semiconductor body (1), and wherein, before the introduction of said dopant atoms, an amorphous region is formed in the semiconductor body (1) by means of an amorphizing implantation of inert atoms, and wherein, after the amorphizing implantation, temporary dopant atoms are implanted in the semiconductor body (1), and wherein, after introduction of the dopant atoms of the second conductivity type, the semiconductor body is annealed by subjecting it to a heat treatment at a temperature in the range of about 500 to about 800°C, preferably from 550 to 750°C. Dopant atoms of the second conductivity type are introduced into the semiconductor body (1) by means of ion implantation. In this way pn-junctions are formed which are very suitable for forming source and drain extensions (2A, 3A) of a MOSFET that are very shallow, thermally stable, steep and low ohmic.



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